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Israel

Grain and Feed

Annual

2005

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Report Highlights:
Total food and feed grain imports in MY 2003 amounted to approximately 4.2 million MT (17 percent higher than in the previous year), of which 3.07 million MT (73 percent) were feed and grains. The U.S. market share for feed grains in MY 2003 increased 130 percent above MY 2002 levels, however, this is expected to change in MY 2004 due to a shift in demand from sorghum and corn to feed wheat. Israeli production of milling wheat in crop year 2004 totaled 128,000 MT. Wheat production in crop year 2005 is forecast at 190,000 MT.

Includes PSD Changes: Yes
Includes Trade Matrix: Yes
Annual Report
Tel Aviv [IS1]
[IS]

Executive Summary

Israel is dependent on imports for its grain and feed needs. Wheat for milling is the main domestically produced commodity, supplying nearly 17 percent of approximately 900,000 tons consumed annually. Total food and feed grain imports in MY 2003 (October-2003 September-2004) amounted to close to 4.2 million mt (17 percent higher than in the previous year), of which 3.07 (73 percent) million mt were feed grains and the remainder was soybeans, gluten, meals, oats and other substitutes. Imports of wheat for feed decreased in MY 2003 and totaled 181 tmt, a 73 percent decrease. The U.S. market share for feed grains in MY 2003 increased by 130 percent compared to the previous year (from 670 tmt to 1.9 mmt). The U.S. market share is influenced by two phenomena: imports of feed grains from new origins, mainly the Black Sea Basin, and successive droughts in Israel. The fluctuations in U.S. market share is due to the price sensitivity of Israeli feed mills and their ability to easily shift from one source to another. In MY 2003, there was a shortage of feed wheat. As a result, prices were higher and led to an increase in demand for corn and sorghum. U.S. market share is forecast to decrease in MY 2004 due to expected normal yields of wheat in the Black Sea Basin.

In crop year 2004, local wheat production totaled 128 tmt, 31 percent lower than in the previous year, of which 120,600 MT (94 percent) were delivered through the organized marketing system, and the remainder was delivered through the black market. Crop year 2004 was the first year of drought conditions in the southern parts of the country (Negev area) after two successive years of favorable rainfall. Of total production (120,600 MT), 113,000 MT were delivered to emergency stock, 2,100 MT were grown organically, and the remainder suffered from low gluten index and was sold as feed wheat. Seventy-five thousand hectares of wheat were planted in crop year 2005. Production is expected to reach 190,000 MT.

CY 2004 was the first time after many years that grain corn (yellow corn) was planted in Israel to supply the needs of food factories that are exporting to Europe. Production totaled approximately 4,500 MT, coming from a planted area of 500 hectares.

PSD Table Israel Wheat							
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		07-2003		07-2004		07-2005	MM/YYYY
Area Harvested	70	70	65	70	0	75	(1000 HA)
Beginning Stocks	167	165	230	165	200	165	(1000 MT)
Production	187	187	120	128	0	190	(1000 MT)
TOTAL Mkt. Yr. Imports	951	824	1500	1522	0	1490	(1000 MT)
Jul-Jun Imports	951	824	1500	1522	0	1490	(1000 MT)
Jul-Jun Import U.S.	671	621	0	570	0	590	(1000 MT)
TOTAL SUPPLY	1305	1176	1850	1815	200	1845	(1000 MT)
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0	(1000 MT)
Jul-Jun Exports	0	0	0	0	0	0	(1000 MT)
Feed Dom. Consumption	200	190	750	750	0	780	(1000 MT)
TOTAL Dom. Consumption	1075	1011	1650	1650	0	1680	(1000 MT)
Ending Stocks	230	165	200	165	0	165	(1000 MT)
TOTAL DISTRIBUTION	1305	1176	1850	1815	0	1845	(1000 MT)

Wheat Production

In crop year 2004 (October 2003 – September 2004), 81,000 hectares of wheat were planted, of which 11,000 ha (14 percent) were for silage. Seventy-five percent (52,500 ha) were planted in southern Israel. The rest was divided between the Golan, Western Galilee and the northern inner valleys. Crop year 2004 was the first year of drought conditions in the southern parts of the country (Negev region), with crop yield decreasing by 32 percent. Production in crop year 2004 totaled 128,000 MT, of which 120,600 MT (94 percent) were delivered through the organized marketing system: 113,000 MT to wheat stocks, 2,100 MT grown organically, and 5,500 MT sold as feed wheat, due to its low gluten index. Low gluten is attributed to the wheat Bug (eurygaster integriceps put), that has become a significant pest in recent years. The parasite was introduced into the country through wheat from Eastern Europe.

Seventy five thousand hectares of wheat were planted in crop year 2005. At the time of writing this report (February 2005) wheat germination has gone well. The forecast for production in crop year 2005 is 190,000 MT, 48 percent above crop year 2004 levels.

Table 1: Wheat Production, Thousands Metric Tons, Crop Year

Crop Year	Total Production	Percent Change Compared to Previous Year
2001	162	
2002	179	10.49
2003	187	4.47
2004	128	-1.07
2005*	190	48.44
Average Production	**169**	

Source: CBI, Statistical Abstract of Israel, Different Years.
*Forecast: Based on information collected from the Field Crops Organization.

Table 2: Wheat Disposition, by Destination, $ Millions[1], Percent, Nominal Terms, CY

Period	Delivery to Processors		Local Markets		Inter-Mediate Produce		Grand Total	
CY	Value	%	Value	%	Value	%	Value	%
2002	22.2	75.8	1.7	5.8	5.4	18.4	29.3	100.0
2003	29.3	75.9	2.3	6.0	7.0	18.1	38.6	100.0

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

Table 3: Quality of Local Wheat[2], By Protein Level, Tons, Crop Year 2004

Protein Level	Tons	Percent	Cumulative Percent
9.5%-10.5%	7,500	6.6	6.6
10.5%-11.0%	8,000	7.1	13.7
11.0%-11.5%	4,000	3.5	17.2
More than 12%	93,500	82.9	100.0
Grand Total	**113,000**	**100.0**	

Source: Field Crops Journal, Israel, Volume 7, 2004.

Table 4: Protein Level Premium/Fine Table, $ Per Ton, Crop Year 2004

Protein Level	Fine	Premium
Less than 10.5%	$7.5	
10.5%-11.0%	$2.5	
11.5%-12.0%		$ 1.01
More than 12.0%		$ 2.39

Source: Field Crops Journal, Israel, Volume 7, 2004.

Farm Gate Price for Locally Produced Wheat

The price paid to farmers is based on the CBOT price at harvest time (U.S. freight costs and handling costs are added to the base price to make the prices for local and imported wheat equivalent). In crop year 2004, the average base price for milling wheat was $204.47 per ton, 18 percent higher than the price in the previous year. There was an incentive program for growers based on the level of protein content in the wheat. For premium wheat with protein levels between 11.5 and 12 percent a surcharge of $1.01 per MT was added to the base price. For protein levels above 12 percent, the price increased by $2.39 per MT to $206.8. There was a second class of wheat known as “fine wheat” with lower levels of

[1] Exchange Rate, 1 USA Dollar=4.45 NIS.
[2] Wheat that was delivered to the stocks.

protein. Growers were penalized $2.50 per MT for protein content within the range of 10.5 percent to 11 percent. Protein content less than 10.5 percent saw a penalty of $7.50 reduced from the base price. In January 2005, the average base price was $190 per ton.
A price protection program for wheat was put into a place in 1995 to prevent sharp decreases in prices. In crop year 2004, price protection costs amounted to $8/MT.
Of total local wheat production, 7,600 MT (6 percent) were delivered via the black market. Some of this wheat contained a low protein level, therefore, it was delivered via the black market to avoid penalties. In addition, taxes were not paid to the wheat marketing organization and profits increased due to these two factors.

Yields

Considerable differences in yields have been found between fields across the country. In crop year 2004, the average yield in the southern area of Israel was 2.2 tons per hectare, while the average yield in the north totaled 4.7 tons per hectare.

Organic Wheat

In crop year 2004, 2,100 MT (12 percent less than in crop year 2003) of wheat were grown organically, originating from approximately 700 hectares. The average base price for organic wheat in crop year 2004 was about $265 per ton. All organic wheat in crop year 2004 was sold to the milling industry. The production costs for processing of the organic wheat were approximately $22 per ton higher than for regular wheat. The price gap between regular and organic wheat was 30 percent. In the next few years, organic wheat production is expected to decline to 1,500 tons per year, due to a decrease in profitability.

Stocks

Currently, there are two companies that hold wheat stocks, Tvuoot and Shtibel. At the beginning of October, stocks were 165,000 tons, however, that is expected to drop to 10,000 tons by next September. Due to a shortage in wheat this cycle occurs every year. In crop year 2004, 113,000 MT of the local wheat were delivered to stocks, while the rest was imported.

Value of Wheat Production

In CY 2003, the value of wheat production increased for the second consecutive year by 32 percent above CY 2002 levels (from $29.3 million to $38.6 million). Wheat value, as a share of total value of agricultural production, also increased during CY 2003 (see table 5). This trend is not expected to continue in CY 2004 due to less local production.

Table 5: Agricultural and Wheat Production Value, CY, $ Million, Real Terms (2003=100.0)

Agriculture Sector	2002	2003
Total for Agriculture Sector	3,537.9	3,604.8
Of Which: Field Crops	227.2	247.6
Of Which: Wheat	29.3	38.6
Wheat as Percentage of Total Agriculture Value	0.8%	1.1%
Wheat as Percentage Of Total Field Crops Value	12.9%	15.6%

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

Production Policy

The continuing tension in the Middle East has convinced the government of the importance of self-sufficiency in food production. Therefore, subsidies have been put into place for wheat production. In CY 2003, the subsidy totaled $6.7 million and represented 4 percent of all agricultural subsidies (see table 6). However, agricultural subsidies over all, and for wheat in particular, decreased by 28 and 51 percent, respectively, compared to 2001 levels.

Table 6: Governmental Subsidies For Local Wheat, $ Millions, CY Real Terms (2003=100)

Subsidies Budget	CY			CY 2003 Percent Change Compared to CY 2001
	2001	2002	2003	
Total Budget For Agricultural Subsidies	213.7	138.7	153.9	-28.0%
Of Which: Local Wheat	13.7	7.0	6.7	-51.1%
Subsidy for Local Wheat as a Percentage of Total Agricultural Subsidies	6.41%	5.04%	4.35%	

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

Consumption

Wheat is consumed by the milling industry and the livestock sector, mainly poultry. Annual consumption in MY 2003 totaled approximately 1.1 million tons, of which about 900,000 tons (82 percent) were consumed by humans, and the rest was consumed by the livestock sector. In MY 2003 the U.S. market share for milling wheat increased by 28 percent and represented 74 percent of the market. Feed wheat is imported solely from the Black Sea Basin. The Israeli feed milling industry shifts easily from corn and sorghum to feed wheat. The shifts happen due to the fact that those are substitute products. Currently, the price for corn is lower than wheat, sorghum and barley. Yellow corn is expected to be the most demanded feed grain in MY 2004.

Table 7: Annual Local Consumption Per Capita, Wheat, Kg

CY	Consumption Per Capita
1990	94.0
1997	102.2
2000	103.0
2001	107.1
2002	105.3
2003	105.5
Average	**102.8**

Source: Central Bureau of Statistics- Israel, Different Years.

The Palestinian Authority

Almost all Palestinian wheat consumption is from imports. There is no organized system for inspection, therefore data are not reliable. The estimate for wheat consumption in the Palestinian Authority is 150-160 Kg (per capita). There are approximately 3.7 million Palestinians in Gaza and the West Bank. Therefore, the annual consumption is estimated at 560,000 tons of milling wheat.

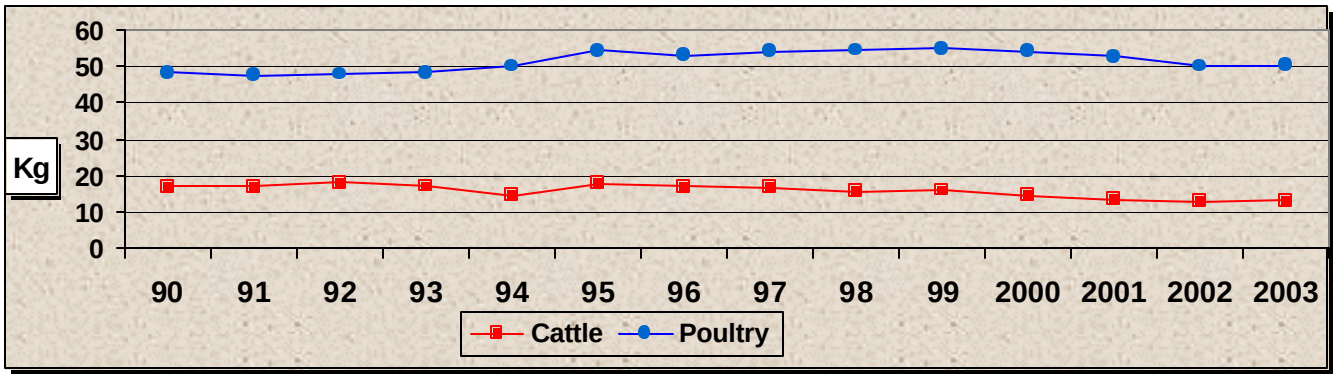
Black Sea Competition

After many years of total American domination of the corn feed and wheat milling markets, sources for these grains are now more diversified. Many Israeli traders consider the Black Sea Basin a "natural" source for grains due to its proximity and the convenience of small shipments. In previous years the price gap between American and Russian wheat was approximately $80: however, the price gap has narrowed due to a Russian price increase. The price gap between the two sources of wheat is near $10-$15. In MY 2003, there was practically no import of feed wheat due to a worldwide shortage. The only feed wheat that was imported was delivered to the turkey industry. Due to normal yields in Eastern Europe in MY 2004, Ukrainian and Russian market share will increase at the expense of American market share. Total imports of feed wheat in MY 2003 totaled 181 tmt, 485 tmt (down 73 percent) less than in MY 2002. The forecast for MY 2004 is for increased imports, reaching 550-600 tmt.

The Broiler and Turkey Industries

In the last 45 years, there has been an increase in poultry consumption in Israel (see chart 1). For CY 2004, broiler production is estimated at 367,000 MT, six percent higher than that in CY 2003. In CY 2005, the feed mix for broilers will be at a ratio of 2:1, corn to feed wheat, respectively. CY 2004 was the third consecutive year that turkey production declined. Total production in CY 2003 decreased by 14 percent compared to the previous year (from 125,000 MT to 108,000 MT). Turkey Production in CY 2004 will total approximately 90,000 MT, 17 percent less than in CY 2003. The decrease in turkey production is a result of a number of factors: 1) an increase in feed mix prices during CY 2004; 2) the prevalence of diseases; 3) low demand for turkey meat; and 4) increasing competition with imported frozen turkey meat. All in all, the forecast for domestic turkey production is for a continued decline to approximately 80,000 MT. Due to the shortage in feed wheat, which is important for the palletizing of feed, all feed wheat was delivered to the turkey industry. In addition, some of the milling wheat that was bought from the U.S. was also delivered to the turkey industry. The decreased consumption in beef and poultry in 2000-2002 is a result of the political tension in the area. Fewer tourists arrived in Israel, and the consumption of meat has been reduced. However, the situation has improved with the improvement of local security.

Chart 1: Annual Cattle and Poultry Consumption, Per Capita, Kg, CY



Source: Central Bureau of Statistics- Israel, Different Years.

Table 8: Monthly Average Price for Feed Mix, $ Per Ton (Excluding VAT)

Months	Feed Mix For Broilers	Percent Change Compared to Previous Year	Feed Mix For Turkeys	Percent Change Compared to Previous Year
1/2004	279.7		286.0	
2/2004	302.0	7.97	304.7	6.54
3/2004	315.0	4.30	315.1	3.41
4/2004	325.1	3.21	326.9	3.74
5/2004	331.5	1.97	332.6	1.74
6/2004	331.4	-0.03	332.1	-0.15
7/2004	310.8	-6.22	311.3	-6.26
8/2004	306.6	-1.35	305.1	-1.99
9/2004	293.8	-4.17	292.8	-4.03
10/2004	277.9	-5.41	280.1	-4.34
Average Price	**$307.4**		**$308.7**	

Source: Agricultural Statistics Quarterly, Israel.

Table 9: Sales[3] of Feed Mix, by Type, Thousand of Tons, CY

CY	For Cattle	For Poultry					For Sheep, Goats and Other Livestock	Grand Total
		Broilers	Layers	Turkeys	Other	Total		
2002	473.1	733.6	295.1	347.3	150.0	1,526.0	291.7	2,290.8
2003	490.0	723.1	306.8	329.7	174.2	1,533.8	315.0	2,338.8
2004[4]	386.2	580.2	233.9	234.6	130.2	1,178.9	245.4	1,810.5

Source: Agricultural Statistics Quarterly, Israel.

[3] Including sales to Palestinian Authority, estimated at about 7%. Excluding sales by feeding centers.

[4] Until September 2004.

Table 10: Feed Mix Share Out of Total Feed Mix Quantity, Percent, CY

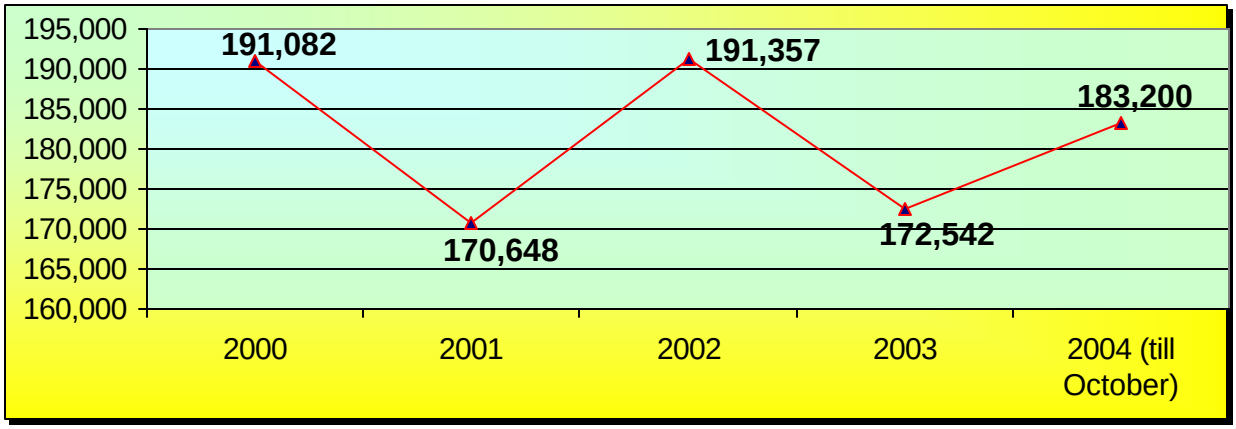
CY	For Cattle	For Poultry					For Sheep, Goats and Other Livestock	Grand Total
		Broilers	Layers	Turkeys	Other	Total		
2002	20.7	32.0	12.9	15.2	6.5	66.6	12.7	100.0
2003	21.0	30.9	13.1	14.1	7.4	65.5	13.5	100.0
2004	21.3	32.0	12.9	13.0	7.2	65.1	13.6	100.0

Source: Agricultural Statistics Quarterly, Israel.

Trade

Total imports of wheat in MY 2003 were 15 percent lower than in the previous year due to the lack of feed wheat from Eastern Europe. Milling and feed wheat imports in MY 2003 totaled 907,000 and 181,000 MT, respectively. Milling wheat imports increased by approximately 48 percent compared to the previous marketing year. On the other hand, total feed wheat import decreased by 73 percent. The U.S. market share for milling wheat in MY 2003 increased by 27.6 percent above MY 2002 levels (from 356 tmt to 673 tmt). Due to the lower price for feed wheat in MY 2004, there will be a shift from corn and sorghum to feed wheat. The U.S. share of milling wheat in MY 2004 is expected to remain at 70 percent. There is a possibility that there will be some import of feed wheat from Canada in April 2005.

Chart 2: Total Imports of Wheat, by Year, CY, Value ($ Thousand)



Source: CBS, Foreign Trade Statistics, Different Years

Table 11: Imports of Wheat, Country of Purchase, CY, $ Thousands

	Value ($ Thousands)			% of Total Imports		
Countries	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
France	10,113	4,615	7,417	5.93	2.41	4.30
Belgium	0	320	223	0.00	0.17	0.13
Netherlands	2,669	18,318	9,609	1.56	9.57	5.57
Austria	429	0	310	0.25	0.00	0.18
Germany	14,482	4,084	6,523	8.49	2.13	3.78
Denmark	0	642	0	0.00	0.34	0.00
U.K.	15,256	17,469	21,769	8.94	9.13	12.62
Other EU	0	0	15	0.00	0.00	0.01
Total EU	**42,949**	**45,448**	**45,866**	**25.17**	**23.75**	**26.58**
Switzerland	13,575	22,523	20,031	7.95	11.77	11.61
Total West Europe	**56,524**	**67,971**	**65,897**	**33.12**	**35.52**	**38.19**
Russia	4,312	15,133	12,302	2.53	7.91	7.13
Ukraine	9,282	9,123	12,846	5.44	4.77	7.45
Hungary	824	2,039	2,983	0.48	1.07	1.73
Romania	2,441	1,035	0	1.43	0.54	0.00
Other East Europe	6,028	1,309	1,160	3.53	0.68	0.67
Total East Europe	**22,887**	**28,639**	**29,291**	**13.41**	**14.97**	**16.98**
Total Europe	**79,411**	**96,610**	**95,188**	**46.53**	**50.49**	**55.17**
U.S.	90,187	93,748	76,536	52.85	48.99	44.36
Argentina	0	38	186	0.00	0.02	0.11
Australia	826	0	0	0.48	0.00	0.00
Others	224	961	632	0.13	0.50	0.37
Total Outside Europe	**91,237**	**94,747**	**77,354**	**53.47**	**49.51**	**44.83**
Grand Total	**170,648**	**191,357**	**172,542**	**100.0**	**100.0**	**100.0**

Source: CBS, Foreign Trade Statistics, Different Years.

* Israel's trade statistics are based on "country of purchase" which in many cases is different from the "country of origin". UK, Netherlands and Switzerland, which are large trading centers, appear in Israel's statistics as suppliers of feed and food grains, when actually they are locations of brokers.

Import Trade Matrix Israel Wheat			
Time Period	MY	Units:	1,000 MT
Imports for:	2002	Imports for:	2003
U.S.	356	U.S.	673
Others		Others	
Total for Others	0	Total for Others	0
Others not Listed	924	Others not Listed	415
Grand Total	1,280	Grand Total	1,088

Barley

PSD Table Israel Barley							
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		10/2003		10/2004		10/2005	MM/YYYY
Area Harvested	4	0.4	5	0.5	0	0.5	(1000 HA)
Beginning Stocks	68	35	57	49	67	45	(1000 MT)
Production	9	2	10	2	0	2.4	(1000 MT)
TOTAL Mkt. Yr. Imports	400	493	450	450	0	480	(1000 MT)
Oct-Sep Imports	400	493	450	450	0	480	(1000 MT)
Oct-Sep Import U.S.	0	0	0	0	0	0	(1000 MT)
TOTAL SUPPLY	477	530	517	494	67	527.4	(1000 MT)
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0	(1000 MT)
Oct-Sep Exports	0	0	0	0	0	0	(1000 MT)
Feed Dom. Consumption	410	470	440	446	0	467	(1000 MT)
TOTAL Dom. Consumption	420	481	450	456	0	477.4	(1000 MT)
Ending Stocks	57	49	67	45	0	50	(1000 MT)
TOTAL DISTRIBUTION	477	530	517	501	0	527.4	(1000 MT)

Barley Production

All barley production is located in the Negev region (south of Israel). Most of it is sold to the Arabic sector for feeding livestock, mainly sheep. Planted area is approximately 500 hectares. Production in crop year 2004 totals 2,000 tons. Total production value in CY 2003

was the same as in the previous year. It is expected that total production in crop year 2005 will reach 2,400 tons.

Table 12: Barely Disposition, by Destination, $ Millions, Real Terms (2003=100), CY

Period	Delivery to Processors		Local Markets		Inter-Mediate Produce		Grand Total	
CY	Value	%	Value	%	Value	%	Value	%
2002	0.0	0.0	0.0	0.0	1.53	100.0	1.53	100.0
2003	0.0	0.0	0.0	0.0	1.55	100.0	1.55	100.0

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

Table 13: Monthly Average Price for Bulk Grain Barley, $ Per Ton (Excluding VAT)

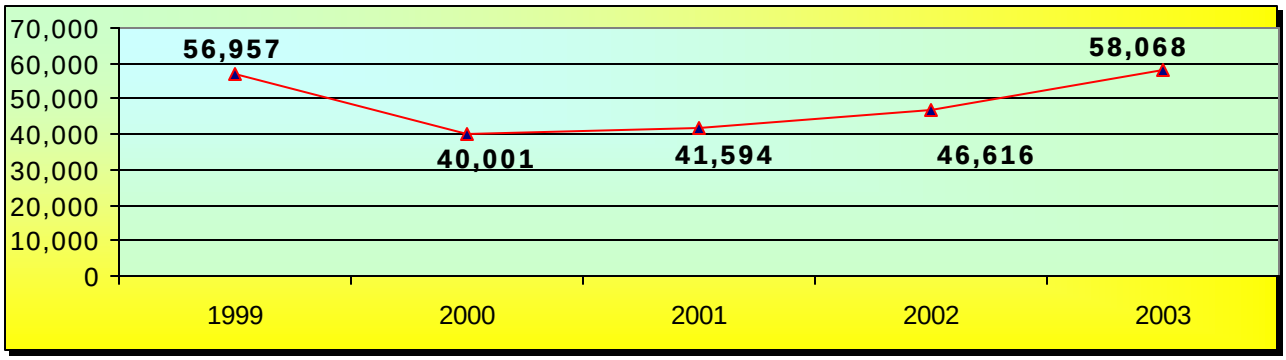
Months	$/Ton	Percent Change Compared to Previous Year
1/2004	171.7	
2/2004	186.1	8.41
3/2004	184.5	-0.86
4/2004	191.8	3.93
5/2004	190.1	-0.89
6/2004	190.1	0.00
7/2004	165.1	-13.13
8/2004	147.3	-10.82
9/2004	145.1	-1.47
10/2004	146.3	0.82
Average Price	**$171.8**	

Source: Agricultural Statistics Quarterly, Israel.

Trade

In MY 2004, barely will be mainly imported from Northern Europe, with small quantities imported from Eastern Europe. Barley price tend to be higher than price for other grains. Some of the barely will be displaced by rye imports from Western Europe, which are $40 cheaper per ton. There has been no import of barely from the U.S. in recent years, and it is not expected to change in the future. Barely imports in MY 2003 totaled 493 tmt, a 7 percent increase above MY 2002 levels. The forecast for imports in MY 2004 is 450 tmt.

Chart 3: Total Imports of Barely, by Year, CY, Value ($ Thousand)



Source: CBS, Foreign Trade Statistics, Different Years

Table 14: Imports of Barely, Country of Purchase, CY, $ Thousands

	Value ($ Thousands)			% of Total Imports		
Countries	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
France	4,408	1,799	4,052	10.60	3.86	6.98
Netherlands	1,934	9,882	12,268	4.65	21.20	21.13
Austria	898	1,918	3,137	2.16	4.11	5.40
Germany	4,201	4,837	1,709	10.10	10.38	2.94
U.K.	6,936	10,160	6,473	16.68	21.80	11.15
Other EU	117	79	1,342	0.28	0.17	2.31
Total EU	**18,494**	**28,675**	**28,981**	**44.46**	**61.51**	**49.91**
Switzerland	6,111	7,647	9,050	14.69	16.40	15.59
Total West Europe	**24,605**	**36,322**	**38,031**	**59.16**	**77.92**	**65.49**
Russia	6,102	4,705	11,399	14.67	10.09	19.63
Ukraine	4,063	2,221	2,979	9.77	4.76	5.13
Hungary	1,002	668	1,080	2.41	1.43	1.86
Romania	252	545	0	0.61	1.17	0.00
Bulgaria	301	117	0	0.72	0.25	0.00
Other East Europe	1,473	216	1,196	3.54	0.46	2.06
Total East Europe	**13,193**	**8,472**	**16,654**	**31.72**	**18.17**	**28.68**
Total Europe	**37,798**	**44,794**	**54,685**	**90.87**	**96.09**	**94.17**
Bahamas	0	800	656	0.00	1.72	1.13
Others	3,796	1,022	2,727	9.12	2.19	4.70
Total Outside Europe	**3,796**	**1,822**	**3,383**	**9.13**	**3.91**	**5.83**
Grand Total	**41,594**	**46,616**	**58,068**	**100.0**	**100.0**	**100.0**

Source: CBS, Foreign Trade Statistics, Different Years.
* Israel's trade statistics are based on "country of purchase" which in many cases is different from the "country of origin". UK, Netherlands and Switzerland, U.S.A, which are large trading, centers, appear in Israel's statistics as suppliers of feed and food grains, when actually they are locations of brokers.

Import Trade Matrix Israel Barley			
Time Period	**MY**	**Units:**	**1,000 MT**
Imports for:	**2002**	**Imports for:**	**2003**
U.S.	0	**U.S.**	0
Others		**Others**	
Total for Others	0	**Total for Others**	0
Others not Listed	460	**Others not Listed**	493
Grand Total	460	**Grand Total**	493

Sorghum

PSD Table Israel Sorghum							
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		10/2003		10/2004		10/2005	MM/YYYY
Area Harvested	0	0	0	0	0	0	(1000 HA)
Beginning Stocks	9	5	14	5	14	5	(1000 MT)
Production	0	0	0	0	0	0	(1000 MT)
TOTAL Mkt. Yr. Imports	105	194	100	50	0	60	(1000 MT)
Oct-Sep Imports	105	194	100	505	0	60	(1000 MT)
Oct-Sep Import U.S.	0	173	0	45	0	56	(1000 MT)
TOTAL SUPPLY	114	199	114	55	14	65	(1000 MT)
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0	(1000 MT)
Oct-Sep Exports	0	0	0	0	0	0	(1000 MT)
Feed Dom. Consumption	95	190	95	47	0	57	(1000 MT)
TOTAL Dom. Consumption	100	194	100	50	0	60	(1000 MT)
Ending Stocks	14	5	14	5	0	5	(1000 MT)
TOTAL DISTRIBUTION	114	199	114	55	0	65	(1000 MT)

Sorghum Production, Consumption and Trade

All sorghum production is used for silage in the livestock sector (mainly cattle). As a result of water shortage in Israel, there are efforts to increase the planted area for sorghum due to the fact that sorghum has extremely high water use efficiency. In addition, under local conditions sorghum can be grown twice a season. In recent years, there has been a rise in demand from cattle growers for feed grains that contain a low level of starch, which is a key characteristic of sorghum.

In CY 2004, 3,000 hectares were planted for sorghum silage, and the area is expected to increase to 3,500 hectares (up 17 percent) in CY 2005. Total production value in CY 2003 increased by 56 percent compared to CY 2002 (see table 16).

Due to the lack of feed wheat from Ukraine, sorghum imports in MY 2003 increased by 331 percent compared to the previous MY (from 45 tmt to 194 tmt). Feed wheat, corn and sorghum are substitute products. The forecast for MY 2004 is for a decrease in sorghum consumption, due to expected normal yields of feed wheat in Eastern Europe.

Some sorghum will be imported from Eastern Europe, as prices are lower compared to U.S. sorghum. The close proximity to Eastern Europe allows for the purchasing of smaller, more frequent shipments. Of total imports in MY 2003, 173,000 MT were imported from the U.S. (89 percent of total imports). The forecast for imports in MY 2004 is for a total of 40-50 tmt.

Table 15: Sorghum Production for Silage, Ton and Ha, Calendar Year

CY	Ha	Yields – Ton	Ton Per Ha
2000	800	12,000	15.0
2001	1,000	13,500	13.5
2002	1,370	18,400	13.4
2003	2,340	30,200	12.9

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

Table 16: Sorghum Disposition, by Destination, $ Millions, CY Real Terms (2003=100)

Period	Delivery to Processors		Local Markets		Inter-Mediate Produce		Grand Total	
CY	Value	%	Value	%	Value	%	Value	%
2002	0.0	0.0	0.0	0.0	2.17	100.0	2.29	100.0
2003	0.0	0.0	0.0	0.0	3.57	100.0	3.57	100.0

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

Table 17: Average Price for Grain Sorghum, $, Real Terms (2003=100), CY

CY	Price Per Ton	Percent change Compared to Previous Year
2001	134.5	
2002	144.3	7.3%
2003	118.9	-17.6%

Source: Ministry of Agriculture and Rural Development, 2003 Annual Report.

R&D

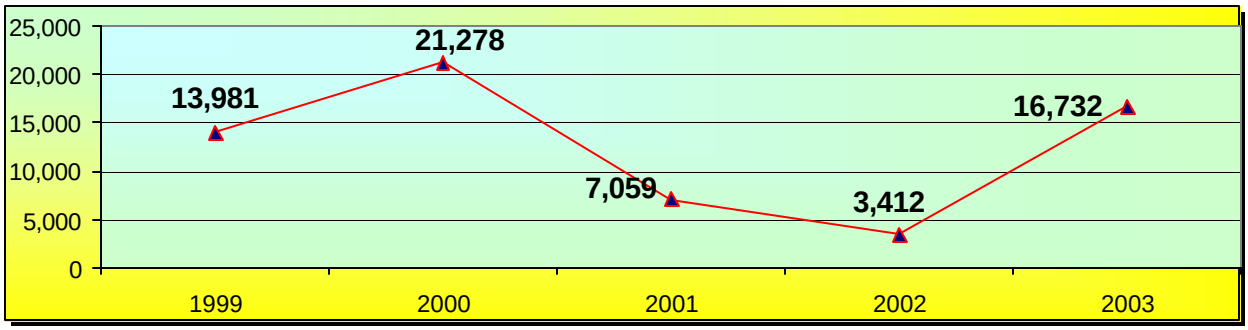
Main R&D efforts are focused on the introduction of the “BMR” gene (BROWN MID RIB) into sorghum production. This gene increases the food use efficiency of cattle. An experiment with sorghum varieties was executed in CY 2003. The BMR seeds for the test were of U.S. origin. The commercial varieties FS-5 and BMR-100 were found to have higher yields than the other varieties (see table 18).

Table 18: Yields by Varieties, Sorghum Experiment, 2003

Variety	Kg Per Ha
FS-5	24,880
BMR 301	14,700
BMR 100	24,900
BMR 201	20,670
Mix 1	19,080
Average	**20,850**

Source: Field Crops Journal, Israel, June 2004.

Chart 4: Total Imports of Grain Sorghum, by Year, CY, Value ($ Thousand)



Source: CBS, Foreign Trade Statistics, Different Years.

Table 19: Imports of Grain Sorghum, Country of Purchase, CY, $ Thousands

	Value ($ Thousands)			% of Total Imports		
Countries	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
France	0	469	0	0.00	13.77	0.00
Netherlands	0	1	263	0.00	0.03	1.57
Germany	622	0	0	8.81	0.00	0.00
U.K.	364	0	570	5.16	0.00	3.41
Total EU	**986**	**470**	**833**	**13.97**	**13.80**	**4.98**
Switzerland (Major trading center)	821	1,893	3,827	11.63	55.58	22.87
Total West Europe	**1,807**	**2,363**	**4,660**	**25.60**	**69.38**	**27.85**
Total East Europe	**185**	**0**	**0**	**2.62**	**0.00**	**0.00**
Total Europe	**1,992**	**2,363**	**4,660**	**28.22**	**69.38**	**27.85**
U.S.	5,063	1,040	12,071	71.72	30.53	72.14
Other	4	3	1	0.06	0.09	0.01
Total Outside Europe	**5,067**	**1,043**	**12,072**	**71.78**	**30.62**	**72.15**
Grand Total	**7,059**	**3,406**	**16,732**	**100.0**	**100.0**	**100.0**

Source: CBS, Foreign Trade Statistics, Different Years.
* Israel's trade statistics are based on "country of purchase" which in many cases is different from the "country of origin". UK, Netherlands and Switzerland, which are large trading centers, appear in Israel's statistics as suppliers of feed and food grains, when actually they are locations of brokers.

Import Trade Matrix Israel Sorghum			
Time Period	MY	Units:	1,000 MT
Imports for:	2002	Imports for:	2003
U.S.	40	U.S.	173
Others		Others	
Total for Others	0	Total for Others	0
Others not Listed	5	Others not Listed	21
Grand Total	45	Grand Total	194

Corn

PSD Table Israel Corn							
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		10-2003		10-2004		10-2005	MM/YYYY
Area Harvested	0	0	0	5	0	9	(1000 HA)
Beginning Stocks	120	80	120	80	120	85	(1000 MT)
Production	0	0	0	5	0	15	(1000 MT)
TOTAL Mkt. Yr. Imports	1400	1292	1000	950	0	800	(1000 MT)
Oct-Sep Imports	1400	1292	1050	950	0	800	(1000 MT)
Oct-Sep Import U.S.	0	1055	0	665	0	456	(1000 MT)
TOTAL SUPPLY	1520	1372	1120	1035	120	900	(1000 MT)
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0	(1000 MT)
Oct-Sep Exports	0	0	0	0	0	0	(1000 MT)
Feed Dom. Consumption	1300	1260	900	900	0	750	(1000 MT)
TOTAL Dom. Consumption	1400	1292	1000	950	0	809	(1000 MT)
Ending Stocks	120	80	120	85	0	91	(1000 MT)
TOTAL DISTRIBUTION	1520	1372	1120	1035	0	900	(1000 MT)

Corn Production and Consumption

Production: In CY 2004, 8,000 hectares were planted for silage corn. In addition, for the first time in many years corn for grain (yellow corn) was grown in Israel during CY 2004. Approximately 500 ha were planted, and production totaled 4,500 MT. Average yield totaled

nine tons per hectare. The seeds were imported from the USA. All of the local grain corn were non-biotech and was consumed by food manufactures that export their products to Europe. The quality of the domestic grain corn was satisfactory. For CY 2005, the local market has placed order for 20,000 MT of domestic corn, however, it is not likely that local production will be able to supply that amount. Grain corn requires non-recycled water irrigation and due to the lack of water in Israel, it will be difficult to increase the local grain corn supply.

Consumption: In MY 2003, corn consumption totaled 1.3 million tons, 85 percent higher than in the previous year. The increase was due to a shortage of feed wheat from Eastern Europe. The demand for corn feed in MY 2004 is expected to decline slightly as a result of increased imports of feed wheat from the Black Sea Basin area. Despite the fact that corn is considered an excellent grain for poultry, its use in broiler rations in Israel is limited. The presence of Xanthophyll 1 pigmentation in corn has the effect of turning the broiler meat yellow. Israeli consumers refuse to buy yellow chickens, since they relate the color to poor health. Limitation on yellow corn content in the broilers' feed ratio on one hand, and high price for feed wheat and sorghum on the other hand, forced millers to import and use white corn for the first time. No import of white corn is expected in MY 2004 due to its higher price compared to other grain prices. In MY 2004, broilers are expected to consume feed mix in a ratio of 2:1, corn to feed wheat, respectively.

Table 20: Monthly Average Price for Bulk Grain Corn, $ Per Ton (Excluding VAT)

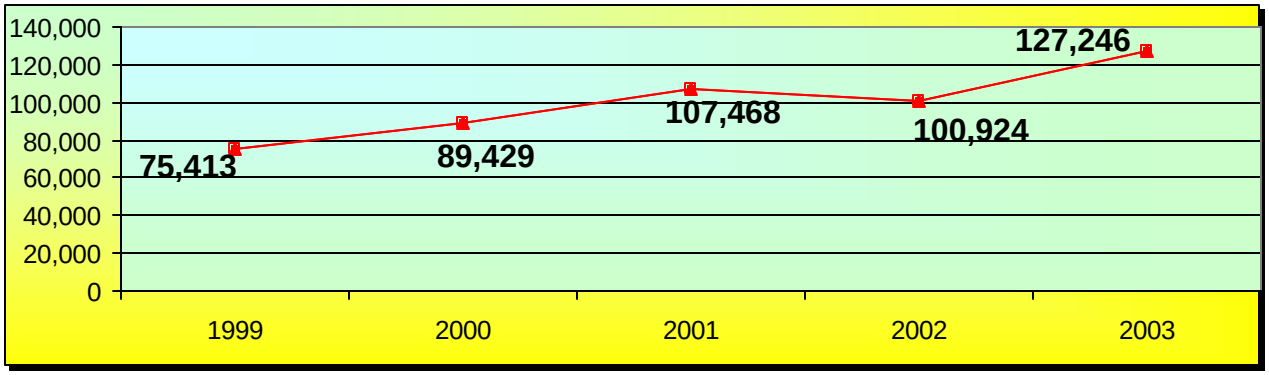
Months	$/Ton	Percent Change Compared to Previous Year
1/2004	165.54	
2/2004	177.61	7.29
3/2004	184.24	3.73
4/2004	196.67	6.75
5/2004	201.18	2.29
6/2004	201.18	0.00
7/2004	188.00	-6.55
8/2004	182.33	-3.02
9/2004	177.38	-2.71
10/2004	176.25	-0.64
Average Price	**$185.04**	

Source: Agricultural Statistics Quarterly, Israel.

Trade

Imports in MY 2003 totaled 1,292 tmt, 594 tmt (85 percent) higher than in MY 2002. In MY 2003, U.S. corn replaced feed wheat. As a result, the market share for U.S. corn increased by 110 percent compared to the previous marketing year (from 39 percent market share to 82 percent market share). Post estimates that imports in MY 2004 will reach 950 tmt. The forecast is for a 70 percent U.S. market share, with Argentina and Eastern Europe supplying the remainder.

Chart 5: Total Imports of Corn, by Year, CY, Value ($ Thousand)



Source: CBS, Foreign Trade Statistics, Different Years.

Table 21: Imports of Corn, Country of Purchase, CY, $ Thousands

	Value ($ Thousands)			% of Total Imports		
Countries	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
France	5,752	3	5,328	5.35	0.00	4.19
Italy	2,016	72	263	1.88	0.07	0.21
Netherlands	1	357	2,513	0.00	0.35	1.97
Austria	0	370	863	0.00	0.37	0.68
Germany	2,648	428	3,208	2.46	0.42	2.52
U.K.	9,526	12,020	7,861	8.86	11.91	6.18
Other EU	0	0	150	0.00	0.00	0.12
Total EU	**19,943**	**13,250**	**20,186**	**18.56**	**13.13**	**15.86**
Switzerland	24,547	24,856	52,032	22.84	24.63	40.89
Total West Europe	**44,490**	**38,106**	**72,218**	**41.40**	**37.76**	**56.75**
Russia	0	370	236	0.00	0.37	0.19
Ukraine	0	0	1,451	0.00	0.00	1.14
Romania	0	129	861	0.00	0.13	0.68
Other East Europe	46	111	129	0.04	0.11	0.10
Total East Europe	**46**	**610**	**2,677**	**0.04**	**0.60**	**2.10**
Total Europe	**44,536**	**38,716**	**74,895**	**41.44**	**38.36**	**58.86**
U.S.	50,396	57,824	47,491	46.89	57.29	37.32
Argentina	8,652	4,344	3,587	8.05	4.30	2.82
Brazil	3,884	31	1,267	3.61	0.03	1.00
Others	0	9	6	0.00	0.01	0.00
Total Outside Europe	**62,932**	**62,208**	**52,351**	**58.56**	**61.64**	**41.14**
Grand Total	**107,468**	**100,924**	**127,246**	**100.0**	**100.0**	**100.0**

Source: CBS, Foreign Trade Statistics, Different Years.

* Israel's trade statistics are based on "country of purchase" which in many cases is different from the "country of origin". UK, Netherlands and Switzerland, which are large trading centers, appear in Israel's statistics as suppliers of feed and food grains, when actually they are locations of brokers.

Import Trade Matrix Israel Corn			
Time Period	MY	Units:	1,000 MT
Imports for:	2002	Imports for:	2003
U.S.	274	U.S.	1,055
Others		Others	
Total for Others	0	Total for Others	0
Others not Listed	424	Others not Listed	237
Grand Total	698	Grand Total	1,292

Table 22: Grains Imports to Israel, MY, Thousand Metric Tons

MY[5]	Milling Wheat	Feed Wheat	Total Wheat	Barley	Corn	Sorghum	Total Import
2000	906	423	1,329	342	1,030	167	2,868
2001	838	739	1,577	430	1,047	31	3,085
2002	614	666	1,280	460	698	45	2,483
2003	907	181	1,088	493	1,292	194	3,067

Source: Ministry of Agriculture, Office of Prices and Supply

Table 23: Imports Share of Total Import Quantity, Percent, MY

MY	Milling Wheat	Feed Wheat	Total Wheat	Barley	Corn	Sorghum	Total Import
2000	31.59	14.75	46.34	5.82	11.92	35.91	100.0
2001	27.16	23.95	51.12	1.00	13.94	33.94	100.0
2002	24.73	26.82	51.55	1.81	18.53	28.11	100.0
2003	29.57	5.90	35.47	6.33	16.07	42.13	100.0

Source: Ministry of Agriculture, Office of Prices and Supply

Table 24: U.S. Market Share of Total Import Quantity, Percent, MY

MY	Milling Wheat	Feed Wheat	Barley	Corn	Sorghum
2000	68	7	0	63	100
2001	74	0	0	73	100
2002	58	0	0	39	89
2003	74	0	0	82	89

Source: Ministry of Agriculture, Office of Prices and Supply

[5] October-September

Table 25: Grain Imports to Israel, by CY, Thousand Metric Tons

CY	Milling Wheat	Feed Wheat	Total Wheat	Barley	Corn	Sorghum	Total Import
2001	836	463	1,299	373	1,058	55	2,785
2002	805	682	1,487	471	872	30	2,860
2003	646	575	1,221	447	947	135	2,750
2004	871	441	1,312	551	1,207	101	3,171

Source: Ministry of Agriculture, Office of Prices and Supply

Table 26: Total from Imports by Quantity, Percent, CY

CY	Milling Wheat	Feed Wheat	Total Wheat	Barely	Corn	Sorghum	Total Import
2001	30.02	16.62	46.64	13.39	37.99	1.97	100.0
2002	28.15	23.85	51.99	16.47	30.49	1.05	100.0
2003	23.49	20.91	44.40	16.25	34.44	4.91	100.0
2004	27.47	13.91	41.37	17.38	38.06	3.19	100.0

Source: Ministry of Agriculture, Office of Prices and Supply

Table 27: U.S. Market Share of Total Import Quantity, Percent, CY

CY	Milling Wheat	Feed Wheat	Corn	Sorghum	Barley
2001	72	6	52	98	0
2002	70	0	85	83	0
2003	66	0	60	88	0
2004	72	0	67	96	0

Source: Ministry of Agriculture, Office of Prices and Supply